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ABSTRACT

Findings of a study that determined the relationship between property taxes and individual adjusted gross income and that examined the feasibility of using these data to define an "income wealth" measure by school district are presented in this paper. Illinois Department of Revenue computer tapes for the tax years 1986-88 were analyzed; findings for the year 1988 are reported in this paper. Findings suggest that Illinois' data collection process must be modified to provide the data basic to relevant "wealth" measurement issues. More accurate measurement techniques are needed to assess the following: aggregate income; aggregate income per pupil; aggregate income per capita; aggregate income per return; and median income per return. Other issues include accuracy, completeness, and timeliness. Seven tables are included. (7 references) (LMI)

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Income and Property Taxes:
An Analysis by School Districts

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Income and Property Taxes:

An Analysis by School Districts

Historically, revenue from the local property tax has been a primary source of support for public schools. However, exclusive reliance on that tax would result in great disparities in per pupil spending among school districts. In order to reduce such disparities, states have developed wealth equalization formulas. These state systems of financing education provide greater state aid to poorer school districts than to wealthier school districts.

The traditional measure of "wealth" in state-local systems of financing education is the assessed valuation per pupil. Simply put, the wealth of a school district is defined as the total value of all taxable property in a school district divided by the number of pupils in that school district. Similar quotients are determined for all other school districts so that a (property) wealth measure exists for each school district. Hence, the state could develop a funding system to allocate state monies per pupil in inverse proportion to the (property) wealth of the school districts.

In the past, it was immaterial whether or not the property valuation was a result of varying distributions of commercial, industrial, agricultural, mineral, railroad, or residential

property. The total value of property, regardless of classification, divided by the number of pupils determines the property wealth measure of school districts.[1] Obviously, owners of various classes of property may not share the same perceptions about funding for education. For example, an owner of agricultural property whose livelihood is dependent on holdings of land may not be as favorably disposed to tax property for education as is a homeowners with children in school. In many situations, farmers are often blamed for the defeat of referenda to increase funding for education (whether or not there is justifiable evidence to support the conclusion).

In addition, county or regional zoning boards determine the classes of property that may be appropriate for given areas. Hence, a school district may not have the flexibility to encourage capital development that would generate additional needed revenue for educational purposes.

States, such as Illinois, have explored proposals to address wealth disparities among school districts. Some proposals would permit local school districts to tax residential property and require all other classes of property to be taxed on a county, regional, or statewide basis. Other proposals would create county or regional financing districts for the purpose of local property tax collection and state aid distribution. The larger taxing districts would contain a more representative distribution of

properties than would smaller taxing districts. Therefore, there would be less disparity among larger taxing districts than among smaller taxing districts in the same area.

Some experts have suggested that a wealth measure based on property wealth is inappropriate or that more appropriate measures of wealth might be used. Cohn & Smith note that a major weakness of "wealth neutrality" studies is "the use of real property valuations as a measure of community wealth."[2] They further point out that

> A more appropriate index would include factors such as sales, income, and other forms of wealth (such as stocks and bonds), all of which impact on the ability of a community to raise funds for local schools.

Odden discussed the advantages and disadvantages of using assessed valuation per pupil versus assessed valuation per capita.[3] The per pupil measure indicates the ability of a school district to raise tax monies for schools, whereas, the per capita measure indicates the ability to raise tax monies for all public services in the area. Odden also discussed the relative merits of using income as a measure of wealth and of using a wealth measure that included income and property wealth.

McMahon developed an econometric model for combining property and income wealth into a single measure of wealth.[4] His approach was to convert property values into an income flow and add it to

income to obtain a comprehensive income flow measure, or to obtain the current and expected income stream from human capital and financial wealth and add it to property values to obtain a comprehensive measure of the total stock of wealth.

Thornton sought to determine the relative importance of income and property in determining expenditures by the use of multiple regression equations.[5] He applied the methodology to four states and found that "the weights accorded property usually averaged 60-80 percent, while those accorded income averaged only about 20-40 percent."

Dembowski, Green and Camerino discussed the methodological issues in the use of income in state aid allocation systems.[6] They point out that if income is to be used in defining state aid allocation systems then income data must be collected by school district. These authors further indicate that income measurement issues that need to be resolved include "accuracy, completeness, and timeliness." In addition, they discuss the relative merits of using per pupil, per capita and per return measures of income by school district. After presenting two approaches to combining income and property measures into a single measure of wealth for state allocation purposes, the additive model and the multiplicative model, they conclude that the additive model appears to give the best results of the allocation schemes which were tested in New York State.

These analyses and findings provide direction in the design of an "income wealth" measure for funding education in the State of Illinois. Illinois has been collecting some income and property tax data by school districts since the 1986 income tax year. It is the purpose of this paper to determine the relationship between property taxes and income and to examine the feasibility of using this collected data to define an "income wealth" measure by school district.

Methodology

Computer tapes for the study were supplied by the Income Tax Division of the Illinois Department of Revenue. Tapes were obtained for tax years 1986, 1987, and 1988. Information was examined for consistencies across the three years, but the results presented in this paper were obtained from an analysis of data for the 1988 tax year.

Computer tapes supplied by the Illinois Department of Revenue included the following variables:

1. School District Code -- a four-digit code that identifies the unit (K-12) school district or the elementary (K-8) and secondary (9-12) school districts in which the taxpayer resides. (Taxpayers are directed but not compelled to supply this information from a list of codes included in the directions for filing Illinois Individual Income Tax returns.)

2. Adjusted Gross Income -- the amount reported on U.S. 1040, U.S. 1040A or U.S. 1040EZ forms.

3. Homeowner's Property Tax -- the amount obtained from deducting the portion of the property tax bill for business expenses from the total property tax bill. (The difference represents the property tax amount on the taxpayer's personal residence.)

A first step in data analysis was to assign the school district identification numbers from the school district code information. This was a simple programming problem that involved generating a set of If-Then statements. As a result of this procedure, it was found that 4,974,378 persons filed Illinois Individual Income Tax returns in 1988 but only 3,929,262 supplied the school code information that was essential to identifying the school district or school districts in which they resided. In other words, approximately twenty per cent (20%) of all persons filing state income tax returns in 1988 **failed** to identify the school district(s) in which they resided.

The finding that approximately twenty percent (20%) of those filing individual income tax returns failed to provide the codes necessary to identify the school district(s) is sufficient to conclude that present income data collection procedures in Illinois do not provide for the completeness advocated by Dembowski, Green and Camerino. If twenty percent of those filing Illinois Individual Income Tax returns failed to provide codes for school district identification, then it is logical to question whether or not this group of taxpayers differed significantly from the group of taxpayers that did provide the codes. The Adjusted Gross Income profiles of all taxpayers, those taxpayers providing codes, and

those taxpayers failing to provide codes are presented in Table I. Table II provides Property Tax Payment profiles for each of the previously mentioned groups.

TABLE I

ADJUSTED GROSS INCOME:
NUMBER OF CASES BY GROUP,
AGI FOR SELECTED PERCENTILES,
AVERAGE AGI

	All Taxpayers	Coders	Noncoders
N	4,974,378	3,963,370	1,011,008
P99	$182,397	$166,911	$248,235
P95	80,912	79,395	89,115
P75	40,308	41,221	35,769
Mdn	21,230	22,311	17,418
P25	9,004	9,748	6,467
P05	1,639	1,871	1,111
P01	313	378	149
Mn	$31,959	$31,744	$32,543

Given the profiles presented in Tables I and II, one could not necessarily conclude that the group of persons failing to provide tax codes was similar to the group of persons providing the tax codes. For example, the median income for noncoders ($17,418) was found to be lower than the median income for coders ($22,311). However, the mean income for noncoders was higher than the median income for coders ($31,744). From Table I, a comparison of values at selected percentiles suggests that the two distributions may be different. The distribution for coders seems to vary less about

the mean than does the distribution for noncoders.

TABLE II

AMOUNT OF PROPERTY TAX PAYMENT:
NUMBER OF CASES BY GROUP,
PROPERTY TAX AMOUNTS FOR SELECTED PERCENTILES,
AVERAGE AMOUNT OF PROPERTY TAX PAYMENT

	All Taxpayers	Coders	Noncoders
N	4,974,378	3,963,370	1,011,008
P99	$9,315	$8,948	$10,968
P95	5,152	5,098	5,464
P75	1,973	2,072	1,256
Mdn	0	0	0
P25	0	0	0
P05	0	0	0
P01	0	0	0
Mn	$1,253	$1,296	$1,082

If the two profiles are different, then it seems unlikely that aggregate AGIs for school districts could be estimated. First, the mere fact that the two profiles are different would make it difficult to predict the addition to the aggregate AGI of coders from the group of persons failing to provide codes. In addition, there is no evidence to indicate that the 20 percent of noncoders are normally distributed across the 997 school districts. The difficulty in determining an aggregate AGI measure for school districts, leads one to assume that a more appropriate measure of school district "income" wealth to be derived from data currently collected may be a median AGI measure.

In developing median AGIs for each school district it seemed necessary to analyze the data and report the results for the following five stages:

Stage 1	All persons filing Illinois Individual Income Tax returns
Stage 2	All persons filing Illinois Individual Income Tax returns **and** supplying a school district code number
Stage 3	All persons filing Illinois Individual Income Tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles
Stage 4	All persons filing Illinois Individual Income Tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles **and** paying property tax payments in excess of $0
Stage 5	All persons filing Illinois Individual Income Tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles **and** paying property tax payments in excess of $0 **and** paying a property tax amount between the amounts at the 1st and 99th percentile at Stage 4

Analysis of data for Stage 1

An analysis of data for all persons filing the Illinois Individual Income Tax return for 1988 revealed that 4,974,378 filed a return. For this group, the median AGI was $21,230 and the mean AGI was $31,959. (Refer to Table III for income data at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.) The median amount of homeowner property taxes paid by the group was $0 and the mean was $1,253. (Refer to Table IV for amounts of homeowner property tax

payments at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.)

Analysis of data for Stage 2

Since data for Stage 1 included cases where persons did not supply the school district code to facilitate identification of the school district(s) identification number, it was necessary to eliminate these cases from further analyses.

Data for analysis at Stage 2 was limited to all persons filing Illinois Individual income tax returns **and** supplying a school district code. The number of persons meeting this condition was 3,963,370. Approximately twenty percent (20%) of those filing returns **failed** to supply the school district code. A loss of information of this magnitude may well have a significant effect on the accuracy of any wealth measure derived from data currently collected by the Illinois Department of Revenue.

For the group of 3,963,370 taxpayers that provided the identification codes, the median AGI was $22,311 and the mean AGI was $31,845. (Refer to Table III for income data at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.) The median amount of homeowner property tax payments by the group was $0 and the mean was $1,299. (Refer to Table IV for amounts of homeowner property tax payments at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.)

Analysis of data for Stage 3

An analysis of the distribution of AGIs for the group at Stage 2 indicated atypical values at the low and high end of the distribution. Therefore, a decision was made to eliminate these outliers from further consideration. Thus, the group at Stage 3 consisted of all persons filing Illinois Individual income tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles. The number of persons meeting these conditions was 3,850,686. This reduction was approximately 2.8 percent of the total of all persons filing Illinois Individual Income tax returns or a total reduction after Stages 2 and 3 of 22.5 percent.

For this group of 3,850,686 taxpayers, the median AGI was $22,321 and the mean AGI was $28,610. (Refer to Table III for income data at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.) The median amount of homeowner property taxes paid by the group was $0 and the mean was $1,238. (Refer to Table IV for amounts of homeowner property tax payments at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.)

It should be noted that there seems to be very little difference between the median AGIs for Stages 1, 2 and 3. The mean AGIs for Stages 1 and 2 were similar but there was a decline of approximately $3,300 for the mean AGI at Stage 3. This difference

was probably attributable to extreme outliers on the high end of the AGI distribution in Stages 1 and 2.

Respective data for the median and mean homeowner property tax amounts for Stages 1, 2, and 3 were similar.

Analysis of data for Stage 4

An examination of the distribution of homeowner property taxes in Stage 3 indicated that more than fifty percent (50%) of persons filing Illinois Individual Income Tax returns at that stage paid no homeowner property taxes. Persons paying no homeowner property taxes may have included renters, children filing separate returns, and individuals who elected to file the short form for Illinois Income Tax return purposes.

In order to determine the relationship between homeowner property taxes and adjusted gross income, it seemed necessary to place an additional restriction on the number of cases to be considered. Thus, the group of persons at Stage 4 was restricted to all persons filing Illinois Individual income tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles **and** paying property tax payments in excess of $0. The number of persons meeting these conditions was 1,858,110. This reduction was approximately forty percent (40%) of the total of all

persons filing Illinois IndividuaI Income tax returns or a total reduction after Stages 2, 3 and 4 of 62.6 percent.

As expected, statistics for this group of 1,858,110 taxpayers were significantly different from statistics for the three previous stages. The median AGI was $36,538 and the mean AGI was $40,242. An analysis of Table III shows significant increases in the median and mean AGIs between stages 3 and 4. (Refer to Table III for income data at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.) Similarly, there were significant increases in the median and mean amounts of homeowner property taxes from Stage 3 to Stage 4. The median amount of homeowners property tax paid by the group at Stage 4 was $2,106 and the mean amount was $2,566. (Refer to Table IV for amounts of homeowner property tax payments at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.)

Analysis of data for Stage 5

An analysis of the distribution of homeowner property taxes for the group at Stage 4 indicated atypical payments at the low and high end of the distribution. Therefore, a decision was made to eliminate those outliers from further consideration. Thus, the group at Stage 5 consisted of all persons filing Illinois Individual income tax returns **and** supplying a school district code number **and** having an adjusted gross income (AGI) between the amounts at the 1st and 99th percentiles **and** paying property tax

payments in excess of $0 **and** paying a property tax amount between the amounts at the 1st and 99th percentile at Stage 4. The number of persons meeting all these conditions was 1,820,885. This reduction was approximately 0.7 percent of the total of all persons filing Illinois Individual Income tax returns or a total reduction after Stages 2, 3, 4 and 5 of 63.4 percent.

For this group of 1,820,885 taxpayers, the median AGI was $36,488 and the mean AGI was $39,928. (Refer to Table III for income data at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.) The median amount of homeowners property tax paid by the group was $2,106 and the mean was $2,472. (Refer to Table IV for amounts of homeowner property tax payments at the 1st, 5th, 25th, 75th, 95th and 99th percentiles.)

From an examination of Tables III and IV, it should be noted that there seems to be very little difference between the median AGIs for Stages 4 and 5, the mean AGIs for Stages 4 and 5, the median homeowner property taxes for Stages 4 and 5, and the mean homeowner property taxes for Stages 4 and 5.

TABLE III

ADJUSTED GROSS INCOME:
NUMBER OF CASES BY STAGE,
AGI FOR SELECTED PERCENTILES,
AVERAGE AGI

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
N	4,974,378	3,963,370	3,850,686	1,858,110	1,820,885
P99	$182,397	$167,375	$117,532	$133,631	$129,930
P95	80,912	79,469	74,783	89,692	87,667
P75	40,308	41,236	40,761	53,523	53,204
Mdn	21,230	22,321	22,321	36,538	36,488
P25	9,004	9,752	9,975	20,415	20,493
P05	1,639	1,876	2,183	6,703	6,787
P01	313	380	824	2,880	2,934
Mn	$31,959	$31,845	$28,610	$40,242	$39,928

TABLE IV

AMOUNT OF PROPERTY TAX PAYMENT:
NUMBER OF CASES BY STAGE,
PROPERTY TAX AMOUNTS FOR SELECTED PERCENTILES,
AVERAGE AMOUNT OF PROPERTY TAX PAYMENT

	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5
N	4,974,378	3,963,370	3,850,686	1,858,110	1,820,885
P99	$9,315	$8,928	$8,022	$9,692	$8,124
P95	5,152	5,096	4,860	6,226	5,908
P75	1,973	2,075	2,037	3,323	3,290
Mdn	0	0	0	2,106	2,106
P25	0	0	0	1,200	1,218
P05	0	0	0	400	437
P01	0	0	0	138	208
Mn	$1,253	$1,299	$1,238	$2,566	$2,472

After scrubbing the data through the five stages, it was found that 63.4 percent of all Illinois Individual Income Tax returns failed to provide sufficient data to examine the relationship between income and homeowner property tax payments. On the other hand, 1,820,885 Illinois Individual Income Tax returns (36.4 percent of all tax returns) provided sufficient data to examine the relationship between income and homeowner property tax payments. Further, this information was used to determine the relationships between income and property tax payments within each of the 997 school districts that existed in 1988.

Tables V and VI provide summary information for elementary, secondary and unit school districts and information for all school districts combined. It is difficult to draw any conclusions from the information presented in tables V and VI due to the fact that other latent variables may be significant in producing differences in the variables at selected percentiles. For example, elementary school districts are smaller in geographic area than secondary school districts, which may produce greater variance in income and property tax payments among the respective district types. Secondly, unit school districts tend to be associated with larger cities and with large rural areas. Separate elementary and secondary school districts are associated with economically endowed communities of the northeastern section of the state and with economically depressed regions of downstate Illinois. While information regarding income and property tax payments are critical

to the study, it is probably more fruitful to look at the relationship between these two variables within the confines of the respective districts.

In an effort to determine the relationship between income and homeowner property tax payments, correlation coefficients were computed for each of the 997 school districts in Illinois in 1988. It was assumed that the analysis of correlation coefficients between income and homeowner property tax payments within school districts would minimize the effects due to differences in assessment practices and regional economic conditions. Table VII provides a summary of the correlation coefficients computed for each of the groups--429 elementary, 126 secondary, 442 unit, and all 997 school districts.

TABLE V

MEDIAN ADJUSTED GROSS INCOME DATA
FOR ELEMENTARY SCHOOL DISTRICTS,
SECONDARY SCHOOL DISTRICTS, UNIT SCHOOL DISTRICTS,
AND ALL SCHOOL DISTRICTS COMBINED

	Elementary S.D.	Secondary S.D.	Unit S.D.	All S.D.
N	429	126	442	997
P99	$62,433	$55,869	$51,567	$58,476
P95	53,430	50,354	44,235	49,599
P75	43,959	41,715	34,844	39,448
Mdn	36,563	34,673	30,235	33,461
P25	31,474	29,428	26,975	28,371
P05	25,351	25,480	23,839	24,355
P01	22,588	22,743	21,548	21,788
Mn	37,749	36,123	31,523	34,748

TABLE VI

MEDIAN PROPERTY TAX PAYMENT DATA
FOR ELEMENTARY SCHOOL DISTRICTS,
SECONDARY SCHOOL DISTRICTS, UNIT SCHOOL DISTRICTS,
AND ALL SCHOOL DISTRICTS COMBINED

	Elementary S.D.	Secondary S.D.	Unit S.D.	All S.D.
N	429	126	442	997
P99	$5,890	$5,344	$4,209	$5,459
P95	4,643	4,367	2,810	4,264
P75	2,990	2,857	1,427	2,339
Mdn	2,004	1,765	1,075	1,414
P25	1,284	1,132	808	968
P05	800	747	665	638
P01	957	516	598	474
Mn	2,277	2,102	1,279	1,813

TABLE VII

RELATIONSHIP BETWEEN INCOME AND PROPERTY TAX PAYMENTS:
CORRELATION COEFFICIENT FOR ELEMENTARY SCHOOL DISTRICTS,
SECONDARY SCHOOL DISTRICTS, UNIT SCHOOL DISTRICTS,
AND ALL SCHOOL DISTRICTS COMBINED

	Elementary S.D.	Secondary S.D.	Unit S.D.	All S.D.
N	429	126	442	997
P99	0.5908	0.5649	0.6046	0.5918
P95	0.5313	0.5198	0.5271	0.5273
P75	0.4313	0.4332	0.4472	0.4364
Mdn	0.3746	0.3885	0.3863	0.3830
P25	0.3294	0.3518	0.3284	0.3333
P05	0.2410	0.2757	0.2612	0.2581
P01	0.1753	0.2161	0.2012	0.1851
Mn	0.3801	0.3911	0.3887	0.3853

Wolf indicates that "the methods for synthesizing the results of correlational studies that report on the relationship between two variables, both measured on interval or ratio scales, are rather straightforward."[7] The 'effect size' across separate correlational studies is essentially the mean of the correlation coefficients for the respective studies. Hence, the effect sizes for the relationship between income and property tax payments in Illinois for elementary, secondary, unit, and all school districts combined are, respectively, 0.3801, 0.3911, 0.3887, and 0.3853.

The effect sizes of approximately 0.38 do not indicate a particularly strong relationship between income and property tax payments. As a matter of fact, if one were to square the correlation coefficient to obtain an indication of the amount of variance explained this would indicate that approximately 14 percent of the variance in the amount of the property tax payment is explained from adjusted gross income.

Perhaps the finding of a weak relationship between income and property tax payment is evidence of the need to incorporate an income measure into the state-local system of financing education in Illinois. However, the fact that this finding is based on data supplied by 36.4 percent of all persons filing the Illinois Individual Income Tax return is sufficient to defer action until additional information can be examined.

Summary

Findings of this study suggest that the data collection process in Illinois must be modified to provide data basic to relevant "wealth" measurement issues presented by experts in a previous section of this paper. A summary of the findings of this investigation of information collected by the Illinois Department of Revenue is organized around issues suggested by those experts.

Aggregate income. It is unlikely that an aggregate income amount can be determined for each school district unless data collection processes are changed. Approximately 20 percent of all persons filing tax returns failed to identify the school district(s) in which they were located properly. It is difficult to estimate the additional amount that should be attributed to each school district because the income profile of coders and noncoders are different and because there is no evidence that noncoders should be normally distributed among the 997 school districts. Some noncoders could be appropriately placed through the use of zip codes. However, if all noncoders could be placed by zip code, then there would be no need for taxpayers to provide the four digit code to facilitate school district identification.

Aggregate Income Per Pupil. If an aggregate income measure for each school district could be developed, then it is possible to obtain pupil counts by school districts from data tapes compiled by the Illinois State Board of Education. However, until such time as an aggregate income measure for each school district can be

determined, it is unlikely that an aggregate income per pupil measure can be determined for each school district.

Aggregate Income Per Capita. As previously noted, an aggregate income measure for each school district can not be readily computed using currently data collection procedures. An additional difficulty arises from trying to determine the population in each school district. The data tapes provide information regarding the dollar amount for total exemptions. This variable could be divided by $1,000 to give the number of exemptions. However, the number of exemptions includes allowances for filer and spouse 65 years or over and filer and spouse who are legally blind. Therefore, if an aggregate income measure for each school district could be determined, it is likely that a "comparable population count" can be determined for each school district.

Aggregate Income Per Return. As noted above, an aggregate income measure for each school district can not be readily computed using current data collection procedures. However, it would be relatively easy to determine the number of returns for a given tax year. The only difficulty in counting returns is associated with income outliers. It may be necessary to eliminate a few returns at either end of the income spectrum to avoid excessive influence from the outliers.

Median Income Per Return. The computation of a median income measure per return is the most defensible measure that can be obtained from information currently being collected by the State of

Illinois. This measure avoids the problem of determining an aggregate income amount per district and makes use of the more stable measure of the median. The median is not as likely to be influenced by outliers or by a relatively large number of persons incorrectly identifying their home school district. Median income measures per pupil and per capita are difficult to define. Therefore, the easiest income wealth measure to compute for a school district is median adjusted gross income per return. As noted in the analysis, the most stable median AGI measure to use is the Median AGI Per Homeowner return.

Accuracy. Procedures need to be revised if accurate income data is to be collected by school district in the State of Illinois. First, procedures need to be revised to make certain that all persons provide the four-digit code that will lead to correct identification of the district(s) in which the taxpayer resides. Secondly, procedures need to be established to make certain that persons supplying four-digit codes are providing the correct four-digit that describes the district(s) in which the taxpayer resides. Thirdly, the values found for some of the outliers on income and property tax payments are so large or small as to suspect errors. An effort should be made to trap and verify these values.

Completeness. A significant step toward ensuring completeness in data collection would result from requiring all persons that file returns to provide the correct four-digit code necessary for school district(s) identification.

Timeliness. Currently, data used for simulation of general

state aid distributions use pupil counts from the previous school year and property valuations from the previous calendar. In all probability, it would be possible to obtain income data by school district from the second prior year. For example, general state aid entitlements for 1992-93 could be based on pupil counts for 1991-92, property valuations for tax year 1991, and income measures for calendar year 1990.

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